

# SARS

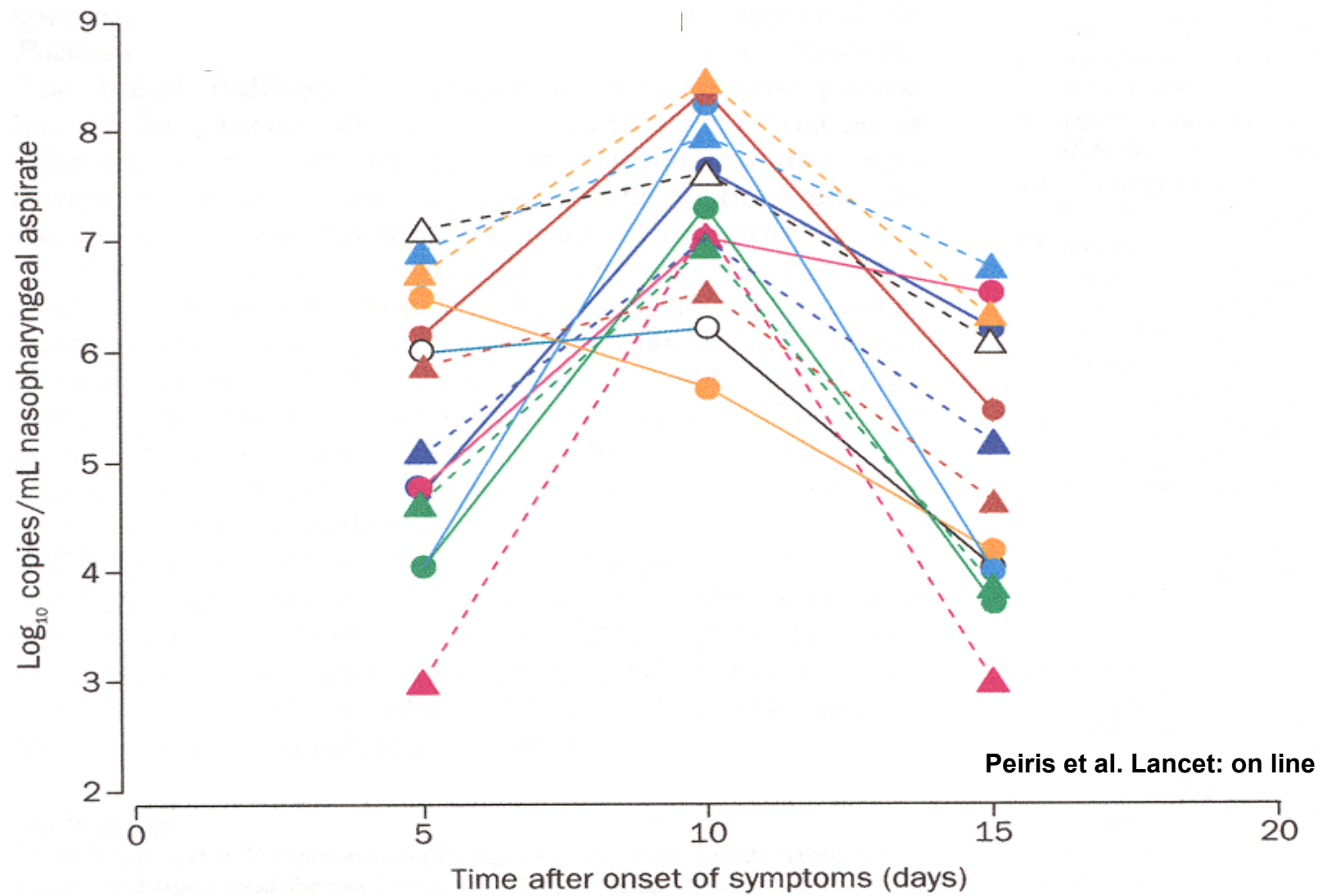
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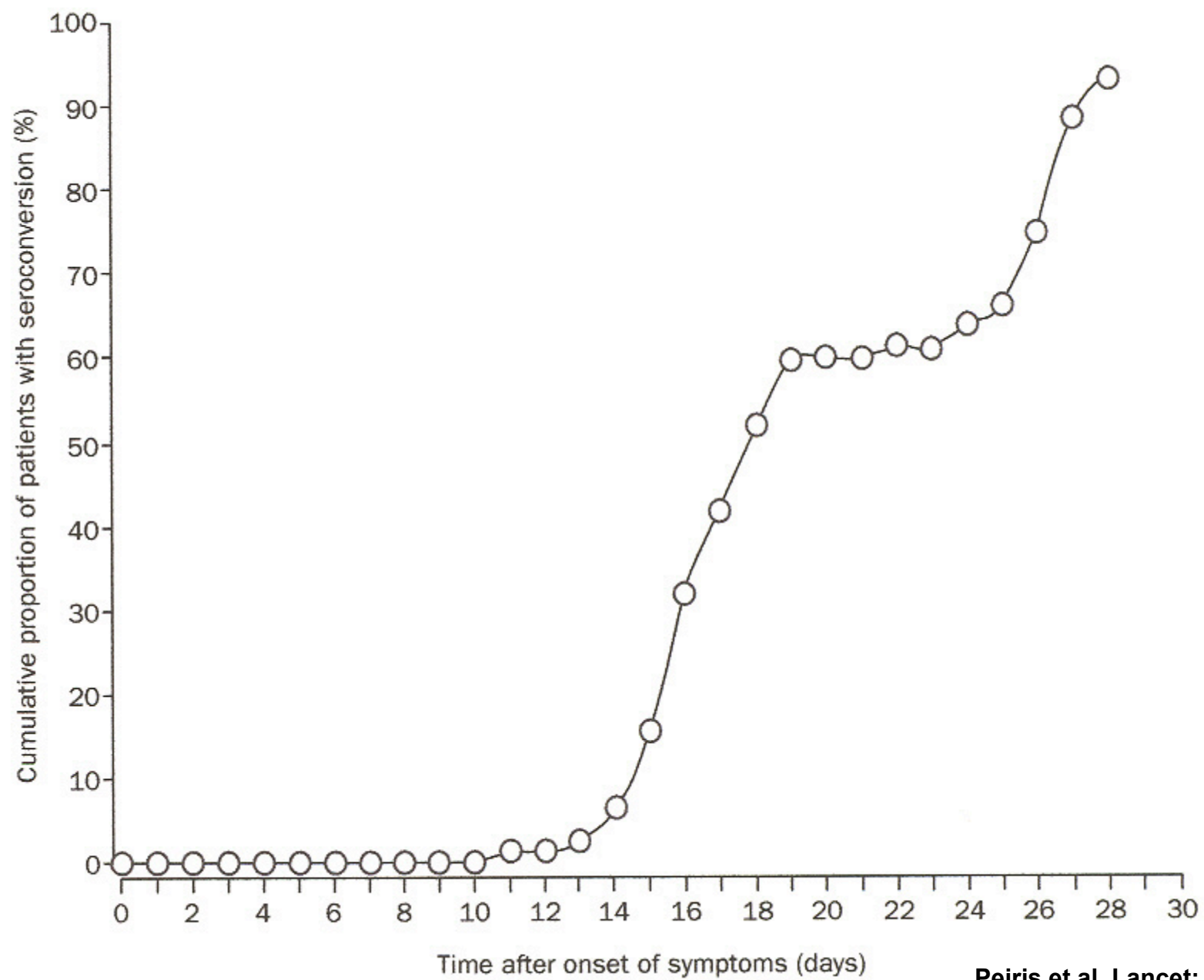


# Course of Illness

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Peiris et al. Lancet: on line



Peiris et al. Lancet: on line



## Association of Coronavirus in Lung Tissue from Fatal Cases of SARS

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- 11 patients and 14 controls from Toronto
- RealArt™ HPA-Coronavirus LC RT Reagents Assay (Artus GmbH, Hamburg, Germany)
- 22 samples from multiple sites: 11/11 positive
- mean duration 20 days (range 8-32).

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Predictor	Viral load		Fisher's Exact Test
	$\geq 10^6$ copies/g lung tissue	$< 10^6$ copies/g lung tissue	
Duration (<21 days)	5/5	0/6	p=0.002
Use of ribavirin	4/5	6/6	p=0.45
Use of steroids	1/5	5/6	p=0.08

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# Infection control for SARS

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# How is SARS spread?

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- MOST OFTEN spread by contact and or droplet
- Other possible routes
  - Airborne (breathing same air without N95 mask)
  - Contact with contaminated environment
  - Re-aerosolization of droplets (eg. When mask removed, or with toilet flushing or bed sheets shaken out)





## How can we prevent transmission?

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- rapidly identify patients and manage them in precautions
- Identify contacts and ensure they don't transmit
- Minimize the opportunities for exposure of staff/other patients to SARS patients
- Minimize the number of droplets the patient produces (eg. minimize coughing, vomiting)

# Protective Barriers: N95 masks, face shields, gown and gloves





# Transmission to HCWs using precautions

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- High risk activities
  - Intubation
- Low risk activities
  - Occult breaks in precautions
  - Leaving SARS room may be just as dangerous as caring for patients



# Clinical Questions

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- Early predictors of severe disease
- Treatment
  - antivirals
  - immunomodulators
- Secondary prophylaxis
- Risk factors for transmission
- Mechanisms of transmission



# Challenges

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- Uncertainties about future disease patterns
- Research during outbreaks
- Research in the developing world
- Therapeutic trials in the absence of knowledge of pathogenesis